Panacea®

AIR ELEMENT MATTRESS

Owner's Manual

Please keep and refer to this Owner's Manual.

Thank you for purchasing a Panacea® Air Element Mattress from Direct Supply Equipment & Furnishings® distributed by Direct Supply Manufacturing, Inc. Please read this entire guide carefully and keep it for future reference. This guide will provide you with instructions, warnings, warranty information and other important information about your mattress. Share this information with your housekeeping, nursing and maintenance staff to help ensure that the mattress is cared for properly.

1-800-634-7328 DirectSupply.com

Table of Contents & Definitions and Symbols

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Definitions and Symbols

NOTE: Indicates a tip.

CAUTION: Indicates correct operating or maintenance procedures in order to prevent damage to or destruction of the equipment or other property.

WARNING: Calls attention to a potential danger that requires correct procedures or practices in order to prevent personal injury.

DEVICE: Panacea® Air Element Mattress.

YOU and YOUR: The facility, community or other entity that has purchased the device.

WE, US and OUR: Direct Supply Manufacturing, Inc.

⚠ Attention. Read the instructions.

Warnings

Read and follow all directions and warnings before using this device.

⚠ **WARNING –**

1. Failure to comply with all directions and warnings may result in injury or death; use only as directed.
2. This device is not suitable for all individuals. Other devices may be required.
3. Inspect the device for damage before each use, and do not use it if it appears to be damaged or not functioning properly.
4. Never alter the device in any way.
5. This device is designed for indoor use only within close proximity to skilled caregivers.
6. This device is not designed to operate with patients or residents weighing more than 300 lbs.

NOTE – Resident's body cannot exceed the width of the mattress at any weight capacity.

NOTE – This device is designed to help provide pressure redistribution* and may require other equipment. This may include, but is not limited to:

1. Bedrails for repositioning and fall prevention.
2. Resident monitoring devices for elopement prevention.
3. Other devices as specified by the caregiver.

⚠ **WARNING –** To reduce the risk of electrocution:

1. Always unplug this unit immediately after using.
2. Do not operate near water.
3. Do not place or store device where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for a device that has fallen into water. Unplug immediately.
6. Do not remove control unit cover. Risk of electrical shock.

⚠ **WARNING –** To reduce the risk of burns, electrocution, fire or injury to persons:

- A product should never be left unattended when plugged in.
- Close supervision is necessary when this product is used by, on or near children or invalids.
- Use this product only for its intended use as described in this manual.
- Do not use attachments not recommended by the manufacturer.
- Never operate this product if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the product to a service center for examination and repair.
- Keep the cord away from heated surfaces.
- Never block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair and the like.
- Never drop or insert any object into any opening or hose.
- Do not use outdoors or operate where aerosol (spray) products are being used.
- Connect this product to a properly grounded outlet only. See Grounding Instructions.

⚠ **WARNING** – This device is only a tool to assist with pressure reduction as part of an overall care plan. Failure to comply with all instructions, warnings and precautions, or using the device for a purpose other than the recommended use, could result in bodily injury or death.

This device is not designed to replace good caregiving practices, including, but not limited to:

- Direct patient and resident supervision.
- Adequate care plans and training for staff personnel for entrapment and fall prevention.
- Inspection and testing before use.

** This pressure redistribution support surface may be appropriate for use as part of an overall care plan to prevent and treat decubitus ulcers. Resident-specific assessment could alter your particular usage of this mattress.*

Introduction

This manual should be used for initial setup of the system and for reference purposes.

General Information/Intended Use

This system is a high quality, affordable mattress system intended for providing pressure redistribution as part of an overall care plan to help treat and prevent pressure ulcers. Resident-specific assessment could alter your particular usage of this device. This device has been tested and successfully approved for the following standards:

EN 60601-1
EN 60601-1-2
EN 55011 Class B
IEC61000-3-2
IEC 61000-3-3

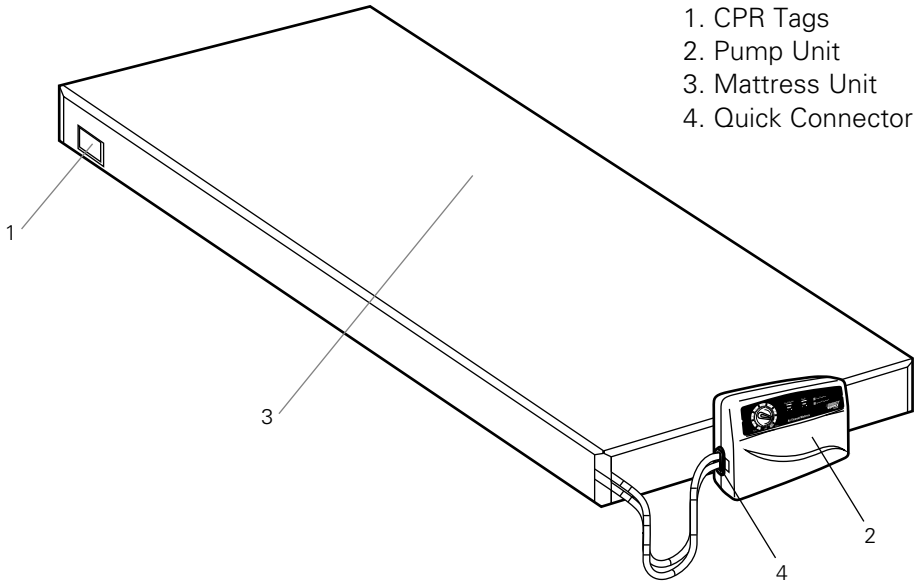
⚠ **WARNING** – FOR U.S. ONLY

Medical Equipment – Air Pump
with respect to electrical shock, fire and mechanical
hazards only in accordance with IEC 60601-1

NOTE – This equipment is not suitable for use in the presence of flammable anesthetic mixture with air, or with pure oxygen or nitrous oxide.

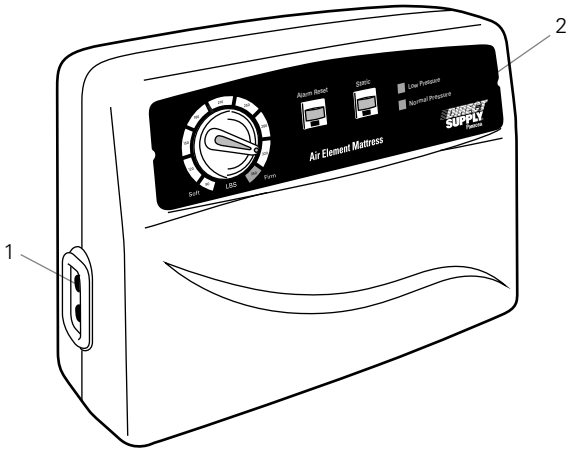
Device Description

Pump and Mattress System

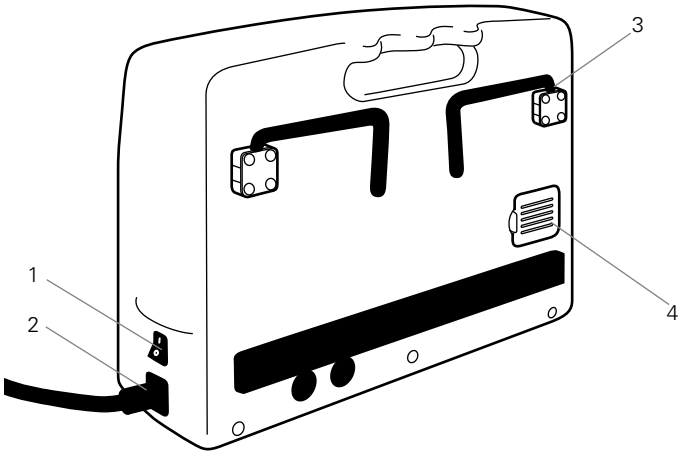


1. CPR Tags
2. Pump Unit
3. Mattress Unit
4. Quick Connector

Pump Unit



Front View
1. Quick Connector Slot
2. Front Panel



Rear View
1. Power Switch
2. Power Cord
3. Bed Frame Hangers
4. Air FIlter

Installation

Unpack the box and check the package contents for completeness.

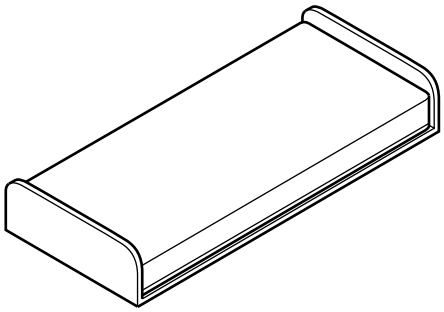
Package Contents List

- Mattress Unit x 1 (may not be included if only Pump Unit is purchased)
- Pump Unit x 1
- User Manual x 1

Inspect equipment for damage which may have occurred during shipment. If there is damage, DO NOT USE and please contact your account manager immediately.

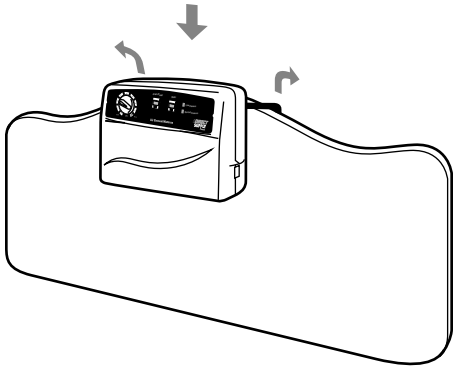
Pump & Mattress Installation

1. Place the mattress or pad on top of an appropriately sized bed frame. Orient the mattress referencing the "Head End" marker printed on the mattress cover. Secure it with end flaps or straps.



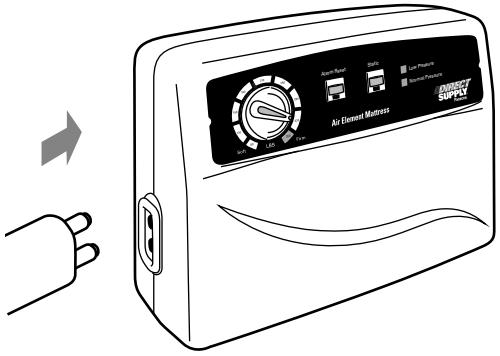
2. Place the pump hangers over the bed railing at the foot of the bed. Support the pump from the bottom and turn the hangers outward (or inward) to secure the pump against the railing.

   If no bed railing is available, place the pump on a flat, sturdy surface or on the floor beneath the bed.



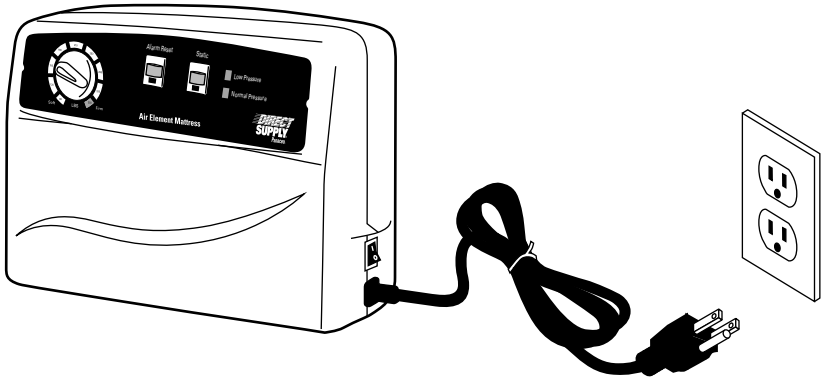
3. Connect the Quick Connector on the air hose (from air mattress) to the pump unit Quick Connector Slot. When you hear a click, the connection has been secured.

   NOTE: Check and ensure the air hoses are not kinked or tucked under the mattress.



4. Plug the power cord into an electrical outlet with the appropriate voltage.
   NOTE: The pump unit must be suitable for the local power voltage.

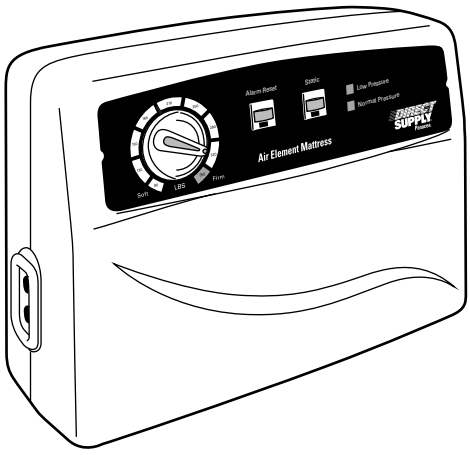
5. Turn the main power switch on pump to the ON position. After you connect power to the pump, you will have to wait at least 30 minutes for the mattress to become fully inflated. The low-pressure indicator (yellow or red LED) will illuminate while the mattress is pressurizing. The audible alarm won't sound within 40 minutes; after that, the audible alarm will be activated if the pressure is still low inside the mattress.



When the appropriate pressure is reached, the low-pressure indicator (yellow or red LED) will go off and the normal-pressure indicator (green LED) will illuminate. The bed is now ready for use.

NOTE: You can unplug the unit to power off the device.

⚠ **CAUTION**: The pump supplied with the mattress can only be used for mattresses recommended by the manufacturer. Do not use it for any other purpose.



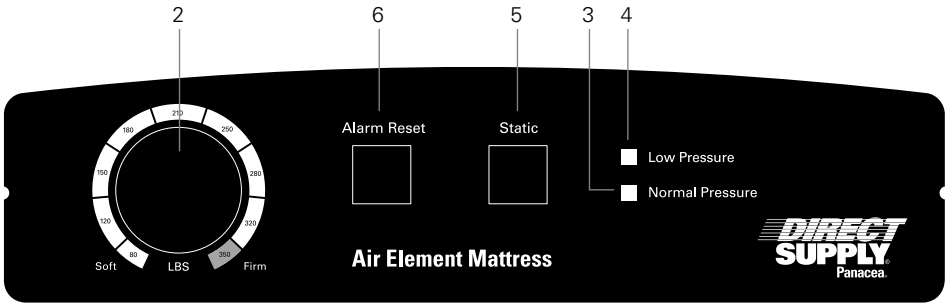
NOTE: (For models WITHOUT the low air loss function) During power outages, you can cover the Quick Connector with the transport cap to maintain air pressure inside the air cells.

NOTE: After installation, make sure any excess cord or tubing is removed from possible foot traffic to avoid accidental tripping. All equipment should be positioned to always allow unhindered resident access by physicians and caregivers.

Operations

NOTE: Always read the operating instructions before use.

Panel Operations



1. **Power Switch**

   The switch is at the right side of the pump. Turn ON/OFF the power, the pump will start/stop operation.

2. **Pressure Adjustment Knob**

   The pressure adjustment knob controls the air pressure in the mattress. Turning the knob clockwise will increase the pressure; counter-clockwise decreases the pressure. Higher pressures will support heavier residents. The pressure should be adjusted according to individual comfort preferences.

   When the mattress is finished pressurizing to the desired level of firmness, the "Normal Pressure" LED indicator will illuminate.

   NOTE: You can generally also check if the pressure is suitable for the patient or resident by sliding one hand beneath the air cells at the level of the resident's buttocks. The air cells will alternately inflate and deflate. You should feel slight contact with the buttocks when the air cells beneath the buttocks deflate. Always consult a licensed healthcare professional if you have questions regarding the appropriate pressure for a specific resident.

   NOTE: Every time the mattress is initialized (inflated), it is recommended that you set the pressure knob to "Max" to hasten inflation. You can then adjust the air mattress to the desired firmness before use.

3. **Normal-Pressure Indicator**

   When the green LED illuminates, the pressure inside of air mattress has reached the desired pressure setting (preset on the pressure adjustment knob).

4. **Low-Pressure Indicator**

   When the mattress is initializing, the Low Pressure LED will illuminate until the appropriate pressure is reached (according to the pressure adjustment knob); this is normal. Otherwise, the Low Pressure LED is a warning, indicating the pressure in the mattress is unusually low. Check to ensure all connections are secured and correctly installed as per the installation instructions.

   NOTE: If the pressure level is consistently low, check for any leakage (tubes or air hoses). If necessary, replace any damaged tubes or hoses or contact your account manager.

5. **Alternate/Static Switch**

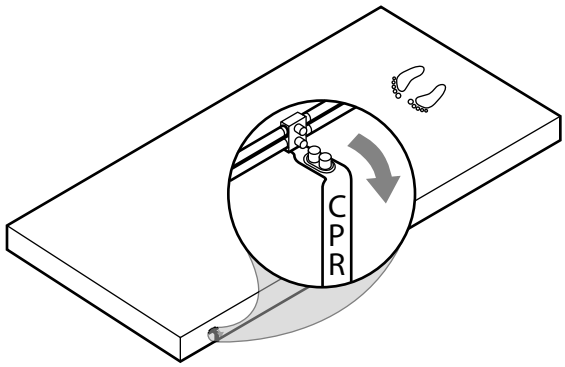
   The ALTERNATE/STATIC switch selects between Alternate Pressure mode and Static Pressure mode. With Alternate Pressure mode, alternating air cells are partially deflated and inflated, avoiding prolonged pressure on any single point beneath the patient or resident; this is to help prevent pressure ulcers. With Static Pressure mode, all of the air cells are equally inflated.

6. **Alarm Reset**

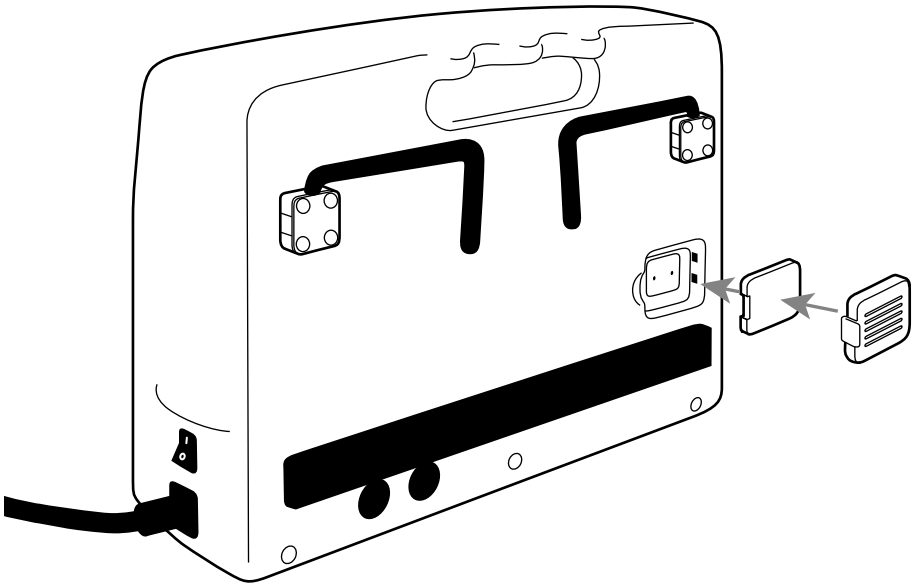
   The audible/visible alarm turns on when the pressure is low. To mute the audible alarm, press the reset button. The visible alarm indicator will flash. Re-press the reset button to reactivate the alarm.

Emergency CPR Operations

CPR must be performed on a firm surface. Therefore, if an emergency CPR situation occurs with the resident on the mattress, the mattress must be quickly deflated. This is done by quickly pulling on the CPR tag located at the head of the mattress on the resident's right side. The Quick Connector found from the pump unit can also be disconnected to hasten deflation.



Air Filter Replacement



Rear View

1. Open the air filter cap located at the back of the pump.
2. The filter is reusable and can be washed gently with a mild detergent and water. Dry the filter before use.
3. Check and replace air filter regularly if environment is dirty.

Cleaning & Storage

Cleaning

It is important to clean the device at least weekly as well as before it is used with a new resident in order to help prevent transmission of pathogens.

Wipe down the pump unit with a damp cloth presoaked with a mild detergent. Avoid contact with dust and proximity to dusty areas. Make sure any cleaning agents you use will not harm or corrode the plastic casing on the pump unit.

⚠ **CAUTION**: Do not immerse or soak the pump unit in liquids.

Wipe down the mattress unit with a damp cloth presoaked with warm water (do not exceed 65°C) containing a mild detergent. Avoid dust and proximity to dusty areas. The cover may also be cleaned using sodium hypochlorite diluted in water. All components should be air-dried thoroughly before use.

⚠ **CAUTION**: Do not use phenolic-based products for cleaning.

⚠ **CAUTION**: Do not dry the mattress in direct sunlight. The mattress and cover should be aerated to fully dry.

⚠ **CAUTION**: Do not heat or steam in autoclave.

⚠ **CAUTION**: The mattress and cover should be aerated to fully dry.

The carrying bag (if available) should be turned inside out and completely wiped down using disinfectant solutions. Allow it to air-dry thoroughly, and then turn it back and wipe down the outside of the bag with disinfectant solutions.

Mattress Storage

1. Lay the mattress on a flat surface, upside down.
2. Roll up the mattress starting from the head until you reach the foot of the mattress.
3. Use the straps at the end of the mattress and stretch them around the mattress to prevent it from unraveling.

NOTE: Do not fold, crease or stack the mattresses.

Troubleshooting

General

1. Check the main power cord and plug for abrasions or excess wear.
2. Check the mattress cover for signs of wear or damage.
3. Disconnect the air tube from the mattress. Then check the airflow coming from the two air outlets on the pump. They should be alternately delivering air when the pump is set at "Alternate" mode.
4. Check the air hoses for kinks or breaks. For replacement, please contact your account manager.

If at any time you suspect your device is not operating properly, discontinue use and contact Direct Supply.

Technical Description

Specifications:

Pump

Power Supply: 110V/60 Hz, 1A
Air Output: 7-8 liter/min.
Pressure Range: 30mmHg - 80mmHg (±10)
Cycle Time: 10 min.
Static Mode
Alarm Reset Mode
Normal/Low-Pressure Light
Size: 11"L x 8"W x 4"H
Weight: 5 lbs.

Mattress

Size: 80"L x 35"W x 8"H
Top Cover: Quilted Cover with zipper
Air Cells: Nylon/PVC
Base: Nylon/PVC with nonskid bottom
17 air cells (5" air cells over 3" foam base)
CPV Valve for emergency procedures
Pillow Function
Low Air Loss
Quick Connectors

NOTE:

1. Consult Direct Supply for further technical documents.
2. These specifications are also applicable for other regions operating with the same power supply.
3. The manufacturer reserves the right to modify the specifications without notice.

Grounding Instructions

SAVE THESE INSTRUCTIONS

This device must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This device is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

⚠ **WARNING** – Improper use of the grounding plug can result in a risk of electric shock.

If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

NOTE: If the repair or replacement of the cord is necessary, please contact a qualified electrician or serviceman. To reduce the risk of electric shock, do not modify the cord or plug in any way.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the device is properly grounded.

Appendix A: EMC Information

Guidance and manufacturer's declaration – electromagnetic emissions

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Emissions test	Compliance	Electromagnetic Environment – Guidance
Harmonic emissions IEC 61000-3-2	Class A	This device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacturer's declaration – electromagnetic immunity

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance	Electromagnetic Environment – Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0,5 cycles 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec.	<5% UT (>95% dip in UT) for 0,5 cycles 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec.	Mains power quality should be that of a typical commercial or hospital environment. If the user of this device requires continued operation during power mains interruptions, it is recommended that this device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: UT is the A.C. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic environment – Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of this device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1{,}2\sqrt{P}$ $d = 1{,}2\sqrt{P}$ 80 MHz to 800 MHz $d = 2{,}3\sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,a should be less than the compliance level in each frequency range. b Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast, cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which this device is used exceeds the applicable RF compliance level above, this device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating this device.			
b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

Recommended separation distances between portable and mobile RF communications equipment and this device.

This device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of this device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this device as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter** m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	**80 MHz to 800 MHz** $d = 1,2\sqrt{P}$	**800 MHz to 2,5 GHz** $d = 2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Limited Warranty

We offer to you, as the original purchaser, a warranty for the Panacea Air Element Mattress. Our warranty applies for the limited warranty period stated below. If any device or device part listed below is defective in material or workmanship during the applicable limited warranty period, we will repair or replace it at our cost. Please note that the decision to repair or replace a device or device part will be at our discretion. Our warranty applies only if the device is properly maintained by the original purchaser for normal, indoor use and does not cover normal wear and tear, modification of the device, or damage caused by abuse, improper use, failure to maintain, use which exceeds the published device limitations, or the combination of any device with another device. In addition, our warranty does not cover fading, characteristics or natural variations in fabric, texture, colorfastness, stains, spills or exposure to chemicals, odors, heat or light. In certain cases, we may provide you repair or adjustment instructions and/or replacement parts, and ask you to perform a repair or adjustment or replace a defective part.

Our warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Please note that our limited warranty period begins when we ship the device to you. The limited warranty period and our obligations under the warranty end once you transfer the device to someone else or at the end of the applicable limited warranty period identified below, whichever is earlier.

Device/Part	Warranty Period (Parts Only)	Anticipated Usable Device Life
Electrical Components	1 year	3 years
Mattress (Parts)	1 year	5 years
Cover (Parts)	1 year	1 year

Anticipated Usable Device Life is based on normal use with proper maintenance, cleaning and storage. You should still inspect, monitor and care for the device as described in this guide, as the device may need to be replaced sooner than anticipated in particular situations.

DIRECT SUPPLY MANUFACTURING, INC. MAKES NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; THESE AND ALL OTHER IMPLIED WARRANTIES ARE SPECIFICALLY DISCLAIMED. TO THE FULLEST EXTENT ALLOWED BY LAW, DIRECT SUPPLY MANUFACTURING, INC. WILL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS THAT MAY RESULT FROM THE DEVICE OR YOUR USE OF OR INABILITY TO USE THE DEVICE EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. OUR TOTAL LIABILITY TO YOU, IF ANY, IS LIMITED TO THE PRICE OF THE DEVICE OR SERVICE GIVING RISE TO YOUR CLAIM. Some states do not allow an exclusion or limitation of incidental or consequential damages, or how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. If implied warranties are not excluded, and to the extent allowed by law, we limit any and all implied warranties to the applicable warranty period identified above. Except for rights under any applicable state law, the remedies provided under this warranty are your sole and exclusive remedy for any breach of our warranty and state the entire limit of our responsibilities.

Customer Service

Our promise to you is that you will have a convenient and easy ordering experience, receive a quality Panacea Air Element Mattress and enjoy outrageous customer service. If you have any questions about the mattress you have purchased or would like to request warranty service, please contact: **Direct Supply Equipment & Furnishings** at 1-800-634-7328, 6767 N. Industrial Road, Milwaukee, WI 53223, SalesSupport@DirectSupply.com.

DirectSupply.com

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